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WASHINGTON, DC 20005

EXAMINER

MARIAM, DANIEL G

ART UNIT	PAPER NUMBER
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2624

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/725,542	Applicant(s) CANNON ET AL.	
	Examiner DANIEL G. MARIAM	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7,9-12,14-21,23,24,26-28,30,32,34,38,40,41 and 43-48 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 43-48 is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7,9-12,14-21,23,24,32,34,38 and 40 is/are rejected.
- 7) ☒ Claim(s) 26-28,30 and 41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. In response to the Office Action mailed on January 9, 2008, applicants have submitted an amendment filed on April 9, 2008. Amending claims 3, 5, 9 and 14-15; canceling claim 29; adding new claim 48; and arguing to traverse the rejection of claims 1-3, 5-7, 9-12, 14-21, 23-24, 26-28, 30, 32, 34, 38 and 40-41.

Response to Arguments

2. Applicants' arguments with respect to claims 1-3, 20-24, 32, 34, 38, and 40 filed on April 9, 2008 have been fully considered but they are not deemed to be persuasive for at least the following reasons.

3. In summary, applicants argue starting on page 15 of the remarks, that Reuchlin does not disclose a receiving module for receiving image data captured in a first, polar coordinate system and a coordinate conversion module coupled to the receiving module for converting the image data captured in the first, polar coordinate system to converted image data in a second coordinate system. The Examiner respectfully disagrees. First, the claim does not identify that the coordinate conversion module being directly coupled to the receiving module. Second, the claim does not identify the conversion module being separate/different from the receiving module except each one is labeled as a receiving module that captures image data in a first, polar coordinate system and a coordinate conversion module coupled to the receiving module for converting the polar into a second coordinate system. Third, the claim does not exclude preprocessing and/or intermediate processing in order to change the captured image data via a first polar coordinate system into image data in a second coordinate system. Therefore, given the broadest reasonable interpretation, the reference to Rachlin discloses a system for processing

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image data representing biometric, i.e., fingerprint, data (See for example, Figs. 1-2), which includes: a receiving module for receiving image data captured in a first polar coordinate system (this feature reads on computer (17), in Fig. 2 since a computer generally has several built-in modules to perform standard communication or input and output operations); and a coordinate conversion module, i.e., computer 17, coupled to the receiving module for converting the image captured in the first, polar coordinate system to converted image data in a second coordinate system, i.e., Cartesian (the conversion module is considered inherent because without it Rachlin would not be able to convert internally the received image data presented in polar form via computer 17 into Cartesian form) (See for example, col. 4, lines 42-51). Thus, each of the requirements of the above-identified claims is met by Rachlin.

4. Applicant's arguments (as amended), see pages 16-29, filed April 9, 2008, with respect to the rejections of claims (5-7, 9-12, 14-19) and (1, 6, 9, 15, 20, 23, 32, and 38) under 35 USC 102 and 103 respectively, have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground of rejection is made in view of Sayag (5,801,681) which will be discussed in the rejection below.

Examiner's Note

5. Examiner has cited particular columns and line numbers or figures in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially

teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3, 20-21, 23-24, 32, 34, 38, and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Rachlin (4,925,300).

8. With regard to claim 1, a system for processing image data representing biometric, i.e., fingerprint, data (See for example, Figs. 1-2), the system comprising: a receiving module for receiving image data captured in a first polar coordinate system (this feature reads on computer (17), in Fig. 2 since a computer generally has several built-in modules to perform standard communication or input and output operations); and a coordinate conversion module, i.e., computer 17, coupled to the receiving module for converting the image captured in the first, polar coordinate system to converted image data in a second coordinate system, i.e., Cartesian (the conversion module is considered inherent because without it Rachlin would not be able to convert the image data that is received in polar form into Cartesian form) (See for example, col. 4, lines 42-51).

With regard to claim 2, the system of claim 1 further comprising a memory, i.e., storage, coupled to the coordinate conversion module (See for example, Fig. 2).

With regard to claim 3, the system of claim 1 wherein the second coordinate system is a rectangular, i.e., Cartesian, coordinate system (col. 4, lines 50-51).

With regard to claim 20, a system for processing image data representing biometric, i.e., fingerprint, data (See for example, Figs. 1 and 2), wherein the system comprises: a conversion module configured to convert for converting image data captured in a first polar coordinate system to converted image data in a second coordinate, i.e., Cartesian, system (See for example, computer 17, in Fig. 2; and col. 3, line 65 – col. 4, line 51). Applicants' attention is also invited to the argument presented above for claim 1 or paragraph 3.

With regard to claim 21, the system of claim 20 wherein the second coordinate system is a rectangular, i.e., Cartesian, coordinate system (See for example, col. 4, lines 50-51).

Claim 23 is rejected the same as claim 2 except claim 23 is a method claim. Thus, argument similar to that presented above for claim 2 is applicable to claim 23.

Claim 24 is rejected the same as claim 3 except claim 24 is a method claim. Thus, argument similar to that presented above for claim 3 is applicable to claim 24.

With regard to claim 32, claim 11 encompasses the limitation of this claim except claim 32 is a method claim, and is rejected the same as claim 32. Thus, argument analogous to that presented above for claim 11 is applicable to claim 32.

Claim 34 is rejected the same as claim 12 except claim 34 is a method claim. Thus, argument similar to that presented above for claim 12 is applicable to claim 34.

Claim 38 is rejected the same as claim 20 except claim 38 is a method claim. Thus, argument similar to that presented above for claim 20 is applicable to claim 38.

Claim 40 is rejected the same as claim 21 except claim 40 is a method claim. Thus, argument similar to that presented above for claim 21 is applicable to claim 40.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 5, 7, 9-12, and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rachlin (4,925,300) in view of Sayag (5,801,681).

With regard to claim 9, Rachlin discloses a system for processing image data representing biometric, i.e., fingerprint, data (See for example, Figs. 1-2), comprising: a substantially conical prism for (receiving biometric data at an exterior, convex surface) (See for example, item 3, in Fig. 1); a scanning imaging system (See for example, item 12, in Fig. 1 or 2) optically coupled to the substantially conical prism for capturing the image data in a first coordinate system, and an image conversion system, i.e., computer 17, coupled to the scanning imaging system for converting the image data captured in the first coordinate system, i.e., polar, to converted image data in a second coordinate system, i.e., Cartesian (See for example, col. 3, line 65 – col. 4, line 51). Rachlin does not expressly call for receiving biometric data at an exterior, convex surface. However, Sayag (See for example, Figs. 12, 14 and the associated text; and col. 16, lines 19-26). Therefore, it would have been obvious to one having ordinary skill in the art to employ the structure of an imaging system as taught by Sayag into the system of Rachlin, and to do so would

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at least give a better match to the curvature of the conical surface, and also helps in correcting certain optical aberrations of the optical system (See col. 16, lines 19-26).

Claim 5 is rejected the same as claim 9. Thus, argument similar to that presented above for claim 9 is applicable to claim 5.

With regard to claim 7, the system of claim 5 wherein the second coordinate system is a rectangular, i.e., Cartesian, coordinate system (See for example, col. 4, lines 50-51 of Chaplin).

Claim 10 is rejected the same as claim 5. Thus, argument analogous to that presented above for claim 5 is applicable to claim 10.

With regard to claim 11, the system of claim 10 wherein the image conversion system further comprises a memory, i.e., storage, coupled to the coordinate conversion module (See for example, Fig. 2).

With regard to claim 12, the system of claim 11 wherein the second coordinate system is a rectangular, i.e., Cartesian, coordinate system (col. 4, lines 50-51).

With regard to claim 14, the system of claim 11 wherein the substantially conical prism is a conical prism (See for example, item 3 in Fig. 1, and the associated text).

Claim 15 is rejected the same as claim 9. Thus, argument analogous to that presented above for claim 9 is applicable to claim 15. Claim 15 distinguishes from claim 9 only in that it recites a biometric imaging system, which is also disclosed by Rachlin (See for example, Figs. 1 and 2).

With regard to claim 16 and 17, claim 10 encompasses the limitation of these claims, and are rejected the same as claim 10. Thus, argument analogous to that presented above for claim 10 is applicable to claims 16 and 17.

With regard to claim 18, the system of claim 15 wherein the second coordinate system is a rectangular, i.e., Cartesian, coordinate system (col. 4, lines 50-51).

With regard to claim 19, the system of claim 18 wherein the first coordinate system is a polar coordinate system (See for example, col. 4, lines 47-51).

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chaplin in view of Sayag as applied to claims 5, 7 and 9-12, and 14-19 above, and further in view of Martinez, et al (6,483,932).

With regard to claim 6, Rachlin (as modified by Sayag) discloses all of the claimed subject matter as already discussed above in paragraph 10, and incorporated herein by reference. While Rachlin (as modified by Sayag) discloses the scanning and capturing system coupled to the receiving module (as shown in Fig. 2 of Chaplin), Rachlin does not expressly call for wherein the scanning and capturing system is coupled to the receiving module via a data network. However, Martinez, et al (See col. 4, lines 47-62) teaches this feature. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the teaching as taught by Martinez, et al into the system of Rachlin (as modified by Sayag), so as to establish communication between the capturing system and the receiving module using a data network.

Allowable Subject Matter

12. Claim 48 is allowed. The following is a statement of reasons for the indication of allowable subject matter: the closest prior art of Rachlin does not disclose or fairly suggest,

among other things, prior to receiving the captured image data, receiving criteria associated with specifications for processing the captured image data; generating and storing at least one conversion parameter corresponding to the received criteria; wherein the at least one conversion parameter includes a parameter indicating an interpolation method to be used during conversion. It is for this reason and in combination with all of the other elements of the claim that claim 48 is allowable over the prior art of Rachlin.

13. Claim 43-47 remain allowed for the reasons presented in the Office Action mailed on January 9, 2008, which is incorporated herein by reference.

14. Claims 26-28, 30, and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Numbers: 4,314,763, and 6603542.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G. MARIAM whose telephone number is 571-272-7394. The examiner can normally be reached on M-F (7:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BRIAN P. WERNER can be reached on 571-272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DANIEL G MARIAM/
Primary Examiner, Art Unit 2624

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